Reviewer's report

Title: The Swiss cheese model of safety incidents: are there holes in the metaphor?

Version: 1 Date: 7 September 2005

Reviewer: Andrew Chang

Reviewer's report:

General

1) This study is a fairly important contribution to the field of patient safety. The survey data very nicely demonstrate the dearth and lack of common understanding of a widely accepted theory of error causation and system failure, even among patient safety and quality improvement professionals.

2) The variability in interpretation of James Reason’s Swiss cheese model as shown by the survey results seems compelling and fairly accurate. The author makes a good attempt (and mostly succeeds) in revealing discordant views about the model using fairly simple but sound methods and reliable data to validate anecdotal perceptions.

3) This paper would be a useful source of patient safety relevant information regarding the Swiss cheese model for those seeking evidence- and consensus-based guidance to arrive at improved models. It would be even better if the (minor) revisions below were made.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

None

 Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) The author correctly identifies key limitations of the study but left also an important limitation. Since the study did not (or could not) confirm whether the 85 professionals who claimed to be fairly or very familiar with the model were in fact fairly or very familiar with the model, the variability in interpretation of the components of the model might have been largely due to individuals who simply lacked accurate or factual information about the model; and not necessarily an intentional deviation from the intended interpretation. In other words, one could presumably infer that the variation in interpretation would have been much less pronounced if the survey sample only included respondents who truly understood Reason's model as it was intended.

2) In p. 9, the last sentence, the author states that "an integrated and consensual model" is "yet to be developed." It would be desirable for the author to clarify whether he thought it would be more expedient to develop an entirely new model or refine the existing model.

Discretionary Revisions (which the author can choose to ignore)

1) On p.4, under subheading 'Questionnaire', line 4, the author states that "there are no right or
wrong answers" -- a statement which was read by all respondents before they completed the questionnaire. I am not so sure if this statement applies to all items in the questionnaire or only to certain items. Arguably, depending on whose perspective, there are definitive answers to the questions asked. Interestingly, the section, "Interpretation of the model (p.6)" reported the results as the mean number of "correct" answers, implying there might be wrong answers - a point inconsistent with the original intent to ascertain variation, instead of absolute responses.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests